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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,403	09/21/2004	Shinichiro Yamada	7217/69210	8844

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EXAMINER	
BRUNSMAN, DAVID M	
ART UNIT	PAPER NUMBER
1755	

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/508,403	YAMADA ET AL.	
	Examiner	Art Unit	
	David M. Brunsman	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-13 and 15-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-13 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20060518*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Applicant's response, including amendment, has been carefully considered. Applicant' arguments are treated below in each of the relevant explanations of the outstanding rejections of record.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7, 10-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6107378 in view of US 6512174 and US 5872169.

The '378 patent teaches a method for forming housings for electronic appliances by compounding a biodegradable resin such as polylactic acid and a hydrolysis inhibitor such as an isocyanate or a carbodiimide to maintain mechanical strength. See examples 4-6. The difference between that patent and the instant claims is the addition of a flame retardant such as high purity magnesium hydroxide having a BET surface area less than 5 m2/g. The '174 patent teaches that flame retardants including magnesium hydroxide can be added to similar resins. (See column 5, line 29). It would have been obvious to one of ordinary skill in the art to add a magnesium hydroxide flame retardant to the composition of the '378 patent for that reason. The '169 patent teaches a process for making substantially pure magnesium hydroxide that performs exceptionally well as a flame retardant for resin having a BET surface area of 0.9-3.5 m2/g. See examples 1-14 and column 1, lines 9-11. It would have been obvious to one of ordinary skill in the art to select a magnesium hydroxide like that of the '169 patent because it teaches they perform particularly well.

With respect to new claims 15-17, the percentages cited as "an amount of the [phosphorous or silica] compound" in claims 16 and 17 do not appear to place limits on the flame retardant when it is selected as a hydroxide compound. Those recitations in claims 16 and 17 are thereby anticipated by compositions containing hydroxide flame retardants. The percentage of hydroxide compound recited in claim 15 would have been obvious to one of ordinary skill in the art for the following reasons. Clearly, only simple experimentation would be required, on the order of mixing a series of compositions having different proportions of a known flame retardant, for one of ordinary skill in the art to obtain an optimal amount. Routine experimentation is within the level of ordinary skill in the art. Second, US 6512174 supports a finding that the art recognizes selection of the proportion of flame retardant being within the level of ordinary skill in the art in that column 5, lines 15-42 recite the possible addition of various known additives to polylactic acid polymers without the necessity of recited particular amounts. Third, US 5258422, includes claim 18, assumed to be found fully enabled by the inventor thereof and the patent office, reciting addition of flame retardants to polymer compositions which is supported only be specification disclosure of flame retardant leaving the specific amounts up to the technician. Nor, does the instant specification exhibit unexpected results for comparative compositions having the same flame retardants in amounts outside the ranges of claims 15-17.

Applicant's response argues that the examiner has not pointed out where the motivation can be found to modify the '378 patents with the flame retardants of the secondary references. The first office action clearly indicates that the motivation to modify the '378 patent disclosure lies in the prior art teaching that additional materials such as magnesium oxide, talc and silica act as flame retardants. Every comparative example of the instant specification serves only to confirm this observation that addition of a flame retardant to a polymeric composition retards flame.

Claims 8, 9 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6107378 in view of US 6512174 and US 2001/0018487.

The '378 patent teaches a method for forming housings for electronic appliances by compounding a biodegradable resin such as polylactic acid and a hydrolysis inhibitor such as an isocyanate or a carbodiimide. See examples 4-6. The difference between that patent and the instant claims is the addition of a flame retardant. The '174 patent teaches that flame retardants can be added to similar resins. (See column 5, line 28). Paragraph 53 of US 2001/0018487 teaches the use of 5-40 micron silica in making flame retardant resin compositions. It would have been obvious to one of ordinary skill in the art to add 5-40 micron silica to the composition of the '378 patent because the prior art teaches that it is useful in formulation flame retardant resin compositions and such as desired in the compounding of compositions for making housings for electronic appliances.

With respect to new claims 15-17, the percentages cited as "an amount of the [hydroxide or phosphorous] compound" in claims 15 and 16 do not appear to place limits on the flame retardant when it is selected as a hydroxide compound. Those recitations in claims 15 and 16 are thereby anticipated by compositions containing hydroxide flame retardants. The percentage of silica compound recited in claim 17 would have been obvious to one of ordinary skill in the art for the following reasons. Clearly, only simple experimentation would be required, on the order of mixing a series of compositions having different proportions of a known flame retardant, for one of ordinary skill in the art to obtain an optimal amount. Routine experimentation is within the level of ordinary skill in the art. Second, US 6512174 supports a finding that the art recognizes selection of the proportion of flame retardant being within the level of ordinary skill in the art in that column 5, lines 15-42 recite the possible addition of various known additives to polylactic acid polymers without the necessity of recited particular amounts. Third, US 5258422, includes claim 18,

assumed to be found fully enabled by the inventor thereof and the patent office, reciting addition of flame retardants to polymer compositions which is supported only be specification disclosure of flame retardant leaving the specific amounts up to the technician. Nor, does the instant specification exhibit unexpected results for comparative compositions having the same flame retardants in amounts outside the ranges of claims 15-17.

Applicant's response argues that the examiner has not pointed out where the motivation can be found to modify the '378 patents with the flame retardants of the secondary references. The first office action clearly indicates that the motivation to modify the '378 patent disclosure lies in the prior art teaching that additional materials such as magnesium oxide, talc and silica act as flame retardants. Every comparative example of the instant specification serves only to confirm this observation that addition of a flame retardant to a polymeric composition retards flame.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Brunsman whose telephone number is 571-272-1365. The examiner can normally be reached on M, W, F, Sa; 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David M Brunsman
Primary Examiner
Art Unit 1755

DMB